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(54) Title: NARROWBAND DETECTOR

(57) Abstract: A narrowband signal detector has an adaptable filter and controller for controlling the centre frequency and the bandwidth of the filter, to track the narrowband signal. Better control of the filter can be achieved by basing the filter control on a comparison of output and input to the filter. The comparison gives a more direct measure of how well the filter is tracking the narrowband signal. In the case of a notch filter, if there is poor tracking. The control should be biased rapidly towards improved tracking speed. Otherwise, for good tracking, the control should be biased towards accuracy of tracking. This enables speed and accuracy of detection requirements to be met with less computational load. Applications include telecommunications signalling or data tone detection. Multiple narrowband signals can be detected by a cascade of filters.

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